

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Jeffrey I. Auerbach

SERIAL NUMBER: Continuation of USSN 10/143,862, GROUP NO.: 1637
filed May 14, 2002 (previous application)FILING DATE: Herewith EXAMINER: Kenneth R. Horlick
(previous application)TITLE: IN VITRO AMPLIFICATION OF NUCLEIC ACID MOLECULES VIA
CIRCULAR REPLICONS

Mail Stop Patent Application
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

In accordance with the provisions of 37 C.F.R. 1.97 and 1.98, Applicants hereby make of record the patents and publications listed on the accompanying Form PTO-1449, and other information contained herein, for consideration by the Examiner in connection with the examination of the above-identified patent application. In accordance with 37 C.F.R. 1.98(d) copies of the patents and publications are not enclosed but are available upon request.

REMARKS

In accordance with the provisions of 37 C.F.R. 1.97, this statement is being filed (CHECK ONE):

- (1) within three (3) months of the **filings date** of a national application other than a continued prosecution application under 37 C.F.R. 1.53(d), or within three (3) months of the **date of entry of the national stage** as set forth in 37 C.F.R. 1.491 in an international application, or before the mailing of the **first Office action** on the merits, or before the mailing of a **first Office action** after the filing of a request for continued examination under 37 C.F.R. 1.114; or
- (2) after the period defined in (1) but before the mailing date of a **final action** or a **notice of allowance** under 37 C.F.R. 1.311, and

- the requisite Statement is below, OR
- the requisite fee under 37 C.F.R. 1.17(p), namely \$180.00, is included herein, or
- (3) after the mailing date of a final action or notice of allowance but before the payment of the issue fee, AND
- the requisite Statement is below, AND
- the requisite petition fee under 37 C.F.R. 1.17(p), namely \$180.00 is included herein.

It is respectfully requested that each of the patents and publications listed on the attached Form PTO-1449, and other information contained herein, be made of record in this application.

STATEMENT

As required under 37 C.F.R. 1.97(e), Applicant(s), through the undersigned, hereby state either that [check the appropriate space only if either (2) or (3) is checked on the previous page and the Statement is required]:

- 1. Each item of information contained in the Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application **not more than three months** prior to the filing of the Information Disclosure Statement; or
- 2. No item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing this Statement after making reasonable inquiry, no item of information contained in the Information Disclosure Statement was known to **any individual** designated in 37 C.F.R. 1.56(c) **more than three months** prior to the filing of the Information Disclosure Statement.

Respectfully submitted,



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FORM PTO - 1449		ATTORNEY DOCKET NO.: INL-083CP6C5	
INFORMATION DISCLOSURE STATEMENT		APPLICANT:	Auerbach
		SERIAL NO.:	Not yet assigned
		FILING DATE:	Herewith

U.S. PATENT DOCUMENTS

EXAM. INIT.		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	A1	6,448,017	9/20/2002	Auerbach	435	6	
	A2	6,344,329	2/5/2002	Lizardi	435	91.2	
	A3	6,323,009	11/27/2001	Lasken et al.	435	9.1	
	A4	6,287,824	9/11/2001	Lizardi	435	91.2	
	A5	6,280,949	8/28/2001	Lizardi	435	6	
	A6	6,261,808	7/17/2001	Auerbach	435	91.1	
	A7	6,218,152	4/17/2001	Auerbach	435	91.2	
	A8	6,210,884	4/3/2001	Lizardi	435	6	
	A9	6,183,960	2/6/2001	Lizardi	435	6	
	A10	6,143,495	11/7/2000	Lizardi	435	6	
	A11	6,124,120	9/26/2000	Lizardi	435	91.2	
	A12	6,096,880	8/1/2000	Kool	536	25.3	
	A13	6,077,668	6/20/2000	Kool	435	6	
	A14	6,054,274	4/25/2000	Sampson et al.	435	6	
	A15	6,033,881	3/7/2000	Himmler et al.	435	91.2	
	A16	6,025,139	2/15/2000	Yager et al.	435	6	
	A17	5,942,391	8/24/1999	Zhang et al.	435	6	
	A18	5,888,732	3/30/1999	Hartley et al.	435	6	
	A19	5,876,924	3/2/1999	Zhang et al.	435	5	
	A20	5,874,260	2/23/1999	Cleuziat et al.	435	91.2	
	A21	5,854,033	12/29/1998	Lizardi	435	91.2	
	A22	5,834,202	11/10/1998	Auerbach	435	6	
	A23	5,733,733	3/31/1998	Auerbach	435	6	
	A24	5,714,320	2/3/1998	Kool	435	6	

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FORM PTO - 1449 INFORMATION DISCLOSURE STATEMENT					ATTORNEY DOCKET NO.: INL-083CP6C5 APPLICANT: Auerbach SERIAL NO.: Not yet assigned FILING DATE: Herewith				
	A25	5,614,389	3/25/1997	Auerbach	435	91.2			
	A26	5,612,199	3/18/1997	Western et al.	435	91.1			
	A27	5,595,891	1/21/1997	Rose et al.	435	91.5			
	A28	5,591,609	1/7/1997	Auerbach	435	91.2			
	A29	5,525,462	7/11/1996	Takarada et al.	435	6			
	A30	5,455,166	10/3/1995	Walker	435	91.2			
	A31	5,354,668	10/11/1994	Auerbach	435	91.1			
	A32	5,270,184	12/14/1993	Walker et al.	435	91.2			
	A33	5,089,400	2/18/1992	Meyer	435	69.1			
	A34	4,959,317	09/25/1990	Sauer	435	172.3			
	A35	4,888,274	12/19/1989	Radding et al.	435	6			
	A36	4,683,202	07/28/1987	Mullis	435	91			
	A37	4,683,194	07/28/1987	Saiki et al.	435	6			
	A38	4,673,640	06/16/1987	Backman	435	68			
	A39	4,582,788	04/15/1986	Erllich	435	6			
FOREIGN PATENT DOCUMENTS									
EXAM. INIT.		DOCUMENT NUMBER	DATE	COUNTRY CODE	CLASS	SUB CLASS	FILING DATE	ABSTRACT ONLY	ENGLISH LANG (Y/N)
	B1	WO97/19193	5/29/1997	PCT	C12Q	1/68			No
	B2	WO96/23904	8/8/1996	PCT	C12Q	1/68			No
	B3	WO96/01327	1/18/1996	PCT	C12Q	1/68			No
	B4	WO94/03624	2/17/1994	PCT	C12P	19/34			No
	B5	WO92/01813	2/6/1992	PCT	C12Q	1/68			No
	B6	WO90/11375	4/10/1990	PCT	C12Q	1/68			No
	B7	WO89/06700	7/27/1989	PCT	C12Q	1/68			No
	B8	WO88/10315	12/29/1988	PCT	C12Q	1/68			No
	B9	EP 1020534A1	7/19/2000	European	C12Q	1/68			No
	B10	EP 0971039A2	1/12/2000	European	C12Q	1/68			No
EXAMINER					DATE CONSIDERED				

FORM PTO - 1449 INFORMATION DISCLOSURE STATEMENT					ATTORNEY DOCKET NO.: INL-083CP6C5 APPLICANT: Auerbach SERIAL NO.: Not yet assigned FILING DATE: Herewith				
	B11	EP 329822	8/30/1989	EPO	C12Q	1/68			No
OTHER ART, JOURNAL ARTICLES, ETC.									
EXAM. INIT.	OTHER DOCUMENTS: (Including Author, Title, Date, Relevant Pages, Place of Publication)								
C1	Abremski, K. et al., "Bacteriophage P1 Cre-loxP Site-Specific Recombination: Site-Specific DNS Topoisomerase Activity of the Cre Recombination Protein," <i>J. Biol. Chem.</i> 261:391-396 (1986)								
C2	Abremski, K. et al., "Bacteriophage P1 Site-Specific Recombinatio: Purification and Properties of the Cre Recombinase Protein," <i>J. Molec. Bio.</i> 259:1509-1514 (1984)								
C3	Abremski, K. et al., "Studies on the Properties of P1 Site-Specific Recombination: Evidence for Topologically Unlinked Products Following Recombination," <i>Cell</i> 32:1301-1311 (1983)								
C4	Baner, J. et al., "Signal amplification of padlock probes by rolling circle replication," <i>Nucleic Acids Res.</i> 26(22):5073-8 (1998)								
C5	Bellofatto, V. et al., "Generation of Tn5 Promoter Probe and Its Use in the Study of Gene Expression in <i>Caulobacter crescentus</i> ," <i>Proc. Natl. Acad. Sci.(U.S.A.)</i> 81:1035-1039 (1984)								
C6	Blanco, L. et al. "Highly Efficient DNA Synthesis By Phage ϕ 29 DNA Polymerase," <i>J. Biol. Chem.</i> 264(15):8935-8940 (1989)								
C7	Chatterjee, D.K. et al., "Cloning and Overexpression of the Gene Encoding Bacteriophage T5 DNA Polymerase," <i>Gene</i> 97:13-19 (1991)								
C8	Dattagupta, N., "Nucleic Acid Amplification Employing Transcribable Hairpin Probe," <i>Chem. Abstr.</i> 115(10):107787g [citing European Patent Appln. 427074 A2 (15 May 1991)]								
C9	Eki, T. et al., "Influence of Poly(ADP-robose) Polymerase on the Enzymatic Synthesis of SV40 DNA," <i>J. Biol. Chem.</i> 266:3087-3100 (1991)								
C10	Frohman, M.A., "RACE: Rapid Analysis of cDNA Ends," In: <i>PCR Protocols: A Guide to Methods and Applications</i> Academic Press, NY (1990)								
C11	Gillin, F. et al., "Control of Mutation frequency by Bacteriophage T4 DNA Polymerase: I. The CB 120 Antimutator DNA Polymerase is Defective in Strand Displacement," <i>J. Biol. Chem.</i> 251:5219-5224 (1976)								
C12	Hamilton, D.L. et al., "Site-Specific Recombination by the Bacteriophage P1 loxP-Cre System," <i>J. Molec. Biol.</i> 178:481-486 (1984)								
C13	Higuchi, "Using PCR to Engineer DNA," In: "PCR Technology," Ehrlich, H. (ed.), Stockton Press, NY, 1989, pp 61-68								
C14	Hoess, R. et al., "Interaction of the Bacteriophage P1 Recombinase Cre with the Recombining Site loxP," <i>Proc. Natl. Acad. Sci. (U.S.A.)</i> 81:1026-1029 (1984)								
C15	Hoess, R. et al., "P1 Site-Specific Recombination: Nucleotide Sequence of the Recombining Sites," <i>Proc. Natl. Acad. Sci. (U.S.A.)</i> 79:339803402 (1982)								

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FORM PTO - 1449 INFORMATION DISCLOSURE STATEMENT		ATTORNEY DOCKET NO.: INL-083CP6C5 APPLICANT: Auerbach SERIAL NO.: Not yet assigned FILING DATE: Herewith
	C16	Hoess, R. et al., "The Nature of the Interaction of the P1 Recombinase Cre with the Recombining Site loxP," <i>Cold Spring Harbor Symp. Quant. Biol.</i> 49:761-768 (1984)
	C17	Kolodner, R. et al., "Gene 4 Protein of Bacteriophage T7: Characterization of the Product Synthesized by the T7 DNA Polymerase and Gene 4 Protein in the Absence of Ribonucleoside 5'-Triphosphates," <i>J. Biol. chem.</i> 253:574-584 (1978)
	C18	Kwoh D. et al., "Transcription-Based Amplification system and Detection of Amplified Human Immunodeficiency Virus Type 1 with Bead-Based Sandwich Hybridization Assay," <i>Proc Natl. Acad. Sci (U.S.A.)</i> 86:1173 (1989)
	C19	Low, R.L. et al., "Conservation Of The Primosome In Successive Stages of φX174 DNA Replication," <i>Proc. Natl. Acad. Sci (U.S.A.)</i> 78(3):1436-1440 (1981)
	C20	Mullis et al., "Specific Enzymatic Amplification of DNA in Vitro: The Polymerase Chain Reaction," <i>Cold Spring Harbor Symp. Quant. Biol.</i> 51:263-273 (1986)
	C21	Mullis et al., "Specific Synthesis of DNA in Vitro via a Polymerase-Catalyzed Chain Reaction," In: <i>Met. Enzymol.</i> 155:335-350 (1987)
	C22	Ohara, O. et al., "One-Sided Polymerase Chain Reaction: The Amplification of cDNA," <i>Proc. Natl. Acad. Scie (U.S.A.)</i> 86:5673-5677 (1989)
	C23	Palazzolo, M.J. et al., "Phage Lambda cDNA Cloning Vectors for Subtractive Hybridization, Fusion-Protein Synthesis and Cre-loxP Automatic Plasmid Subcloning," <i>Gene</i> 88:25-36 (1990)
	C24	Parada, C. et al., "Transcriptional activation of pBR322 DNA can lead to Duplex DNA Unwinding Catalyzed by the Escherichia coli Preprimosome," <i>J. Biol. Chem</i> 264:15120-15129 (1989)
	C25	Sauer, B. "Functional Expression of the cre-lox Site-Specific Recombination System in the Yeast <i>Saccharomyces cerevisiae</i> ," <i>Molec. Cell. Biol.</i> 7:2087-2096 (1987)
	C26	Sauer, B. et al., "Site-Specific DNA Recombination in Mammalian Cells by the Cre Recombinase of Bacteriophage P1," <i>Proc. Natl. Acad. Sci. (U.S.A.)</i> 85:5166-5170 (1988)
	C27	Sauer, B. et al., "Site-Specific Insertion of DNA into a Pseudorabies Virus Vector," <i>Proc Natl. Acad. Sci. (U.S.A.)</i> 84:9180-9112 (1987)
	C28	Sternberg, N. et al., "Site-Specific Recombination and Its Role in the Life Cycle of Bacteriophage P1," <i>Cold Spring Harbor Symp. Quant. Biol.</i> 45:297-309 (1981)
	C29	Walker, G.T. et al., "Isothermal in vitro Amplification of DNA by a Restriction Enzyme/DNA Polymerase System," <i>Proc. Natl. Acad. Sci. (U.S.A.)</i> 89:392-396 (1992)
	C30	Walter, N.G. et al., "Strand Displacement Amplification As An In Vitro Model For Rolling-Circle Replication: Deletion Formation And Evolution During Serial Transfer," <i>Proc Natl Acad Sci USA.</i> 91(17):7937-41 (1994)
	C31	Wu, D.Y. et al., "The Ligation Amplification Reaction (LAR) – Amplification of Specific DNA Sequences Using Sequential Rounds of Template-Dependent Ligation," <i>Genomics</i> 4:560 (1989)

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DATE CONSIDERED